

E2
d) storing the modified injection pressure waveform modified in said step (c), in the memory.

REMARKS

I. Introduction

Reconsideration of this application, as presently amended, is respectfully requested. Claims 1-12 are pending in this application. Claims 4-8 have been allowed. Claims 1-3 and 9-12 stand rejected.

II. Rejection of the Claims Under 35 U.S.C. §101

In Item 1 of the Office Action, claims 9-12 were rejected under 35 U.S.C. §101 for allegedly being directed to non-statutory subject matter. A Petition Requesting Suspension of Action Under 37 CFR 1.103(a) is submitted herewith requesting suspension of action in this application because the issue involved in the rejection of claims 9-12 are materially affected by the U.S. Patent and Trademark Office's Proposed Examination guidelines for computer implemented inventions. It is respectfully requested that the resolution of the issues involved in claims 9-12 be suspended until a reasonable time after a decision by the Office on the Proposed Guidelines.

III. Rejection of the Claims Under 35 U.S.C. §112, Second Paragraph

Claims 2 and 3 were rejected under 35 U.S.C. §112, second paragraph, for indefiniteness. Specifically, claims 2 and 3 were rejected because the term "if" in lines 20 and 16, respectively, is allegedly indefinite. Accordingly, the term "if" objected to in claims 2 and 3 has been changed to --when--. It is believed that claims 2 and 3 now particularly point out and distinctly claim the subject matter which

Applicants regard as the invention. Reconsideration and withdrawal of the rejection under 35 U.S.C. §112, second paragraph, are respectfully requested.

IV. Rejection of the Claims In View of the Prior Art

In Item 4 of the Office Action, claims 1-3 and 9 were rejected under 35 U.S.C. §103 as being unpatentable over Japanese Reference No. 60-104306 in view of the prior art disclosed on pages 1-3 of the specification. In Item 5 of the Office Action, claims 10-12 were rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 5,005,116 to Fujita et al. taken with European Patent Application No. 299,0852 to Hara (previously cited). For the reasons set forth in detail below, these rejections are respectfully traversed.

Japanese Reference 60-104306 discloses an apparatus and method for controlling injection molding by using, as a reference profile, injection molding conditions when good products are obtained. However, the 60-104306 reference is silent as to how to arrive at the injection molding conditions which result in good products. Specifically, the 60-104306 reference does not disclose "adjusting" at least one molding condition to generate an adjusted molding condition, "performing" injection pressure control based on the adjusted molding condition, and "detecting" a pressure acting on the resin during injection pressure control to generate an injection pressure waveform, and "setting" the generated waveform as a target waveform, as recited in claim 1. Further, the 60-104306 reference does not disclose periodically sampling detected pressure and storing the sampled pressures in memory to generate an injection pressure waveform. The 60-104306 reference discloses that "control is made by taking out any one of holding pressure set values from a holding pressure setter 17 and injection oil pressure, or resin pressure in molds to be detected by the pressure sensor 18...". However, in the absence of any suggestion as to how the 60-104306 reference arrives at the reference profile, it is respectfully submitted that

the Examiner has impermissibly read applicant's teachings into the prior art to arrive at the claimed invention.

Turning now to the rejection of claims 10-12, Fujita et al. disclose a display to display a graphic step profile of injection speed and injection pressure vs. screw position used in an injection step of an injection molding machine. The display includes means for changing a level of the step profile display picture when an operating condition of the injection molding machine changes. Fujita et al. do not disclose or suggest modifying a waveform by changing a shape of the waveform between designated points of the waveform, as presently recited in claim 10. Fujita et al. only suggest changing a level of a display, and not changing a shape of the waveform between designated points (i.e., points in time). Hara is relied upon to teach means for changing an injection pressure waveform between points on a waveform. Hara discloses a pulse generator which inserts a pulse into a pressure characteristic curve to locally reduce the pressure during a holding step (FIG. 4). However, according to Hara the waveform is completely "cut out" by the pulse. Further, although Hara discloses that the pulse width and amplitude may be modified, Hara does not disclose or suggest designating the points of the waveform between which the pulse is inserted. Therefore, if Fujita et al. and Hara were combined, the result would not be a method wherein the shape of a designated portion of a waveform is modified.

The Office Action asserts that modifying the shape of the injection pressure waveform by changing the waveform portion into a straight line or curved section would have been obvious to one of ordinary skill in the art. It is respectfully submitted that in the absence of any suggestion in the prior art of changing a shape of a designated portion of a pressure waveform, changing the waveform into a straight or curved portion would not have been obvious to one of ordinary skill in the art.

In view of the above remarks it is respectfully submitted that each of claims 1-3 and 9-12 patentably distinguish over the prior art and define allowable subject matter. Reconsideration of the rejections under Section 103 are respectfully requested.

V. Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that each of the claims distinguish over the prior art and therefore define patentable subject matter. A prompt and favorable reconsideration of the rejection and an indication of allowability of all pending claims are therefore respectfully requested.

Should there be any remaining questions to correct formal matters, it is urged that the Examiner contact the undersigned at his convenience for a telephone interview to expedite and complete prosecution.

If any further fees are required in connection with the filing of this Amendment, please charge same to our Deposit Account No. 19-3935.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231

on October 24, 19 95
STAAS & HALSEY

By: William M. Schertler

Date: 10/24/95